

MS 85



University of Pennsylvania

ELECTED 1954
 Councillor 1972-75
 Committee on Library
 1973-84
 Committee on Nomination
 of Officers 1974-75
 Committee on Membership
 1956-60
 Advisory Committee on
 Election of Members
 1975-83
 Committee on Council
 Nominees 1974-75
 Advisory to Council on
 Election 1975-76

DAVID ROCKWELL GODDARD
 (1908-1985)

David Rockwell Goddard was a man respected for his academic achievements and revered for his academic values. He was born on 3 January 1908, in Carmel, California, into a Quaker family that traced its American heritage back to 1666. His father, Pliny E. Goddard was an assistant professor of anthropology at Berkeley, but soon took his family to Leonia, New Jersey, when he became associate curator of ethnology at the American Museum of Natural History in New York City.

David was very close to his father and regarded him as his best teacher. From him, he no doubt derived his sense of independence as a student in secondary school, and later as a scientist. He relished the thought that his best performance in high school came when he was kept out of school for several months because of influenza and studied on his own. When David was fifteen, his father acquired a greenhouse and turned it over to his son to sell nursery stock. It was from this experience that his career in botany stemmed.

In 1925, at age seventeen, he drove across the country to enroll as a freshman at the University of California at Berkeley. His father joined him en route in the New Mexico and Arizona desert for a week or so of camping and exploration, the last time they were together. His father died in the summer of 1928, leaving him with a deep sense of loss and a realization of his own independence and self-sufficiency, characteristics that became so clearly David Goddard's.

At Berkeley, his course work in botany led him to become acquainted with departmental majors and graduate students who invited him to join their field excursions, looking for mosses, liverworts, and fungi. As a result, while still a freshman, he was given a corner in a laboratory in the botany building, and there, he undertook independent study. While only a sophomore, he took his first graduate course with Willis L. Jepson. It was Professor W. A. Setchell, however, who molded his interest into a career path centered in botany, but extending to environmental sciences on the one hand, and through Sumner Brooks, to biochemistry, cell physiology, and mathematics on the other hand. During this period, David also developed his interest in anthropology and philosophy.

His most important experiences in this period were the field trips in the summers where he was research assistant, cook, and driver on a number of expeditions. It was here he grew up intellectually, through the endless discussions he had with senior colleagues out in the field. By the fall of 1929, he was ready to begin graduate studies at Berkeley and continue his independent study. Precocious again, David organized a graduate seminar with two faculty members and was surprised to see himself listed as one of the faculty teaching it.

His Ph.D. research was on the metabolism and nutrition of the ringworm fungus, an investigation that developed his interest in protein structure. Because there were no jobs available during the depression, he stayed on at Berkeley as a teaching fellow (1930–32) and became interested in the genetics of fungi and the susceptibility of the bread mold, *Neurospora*, to x-rays. In 1933, he won a prized National Research Council fellowship to work with Leonor Michaelis at the Rockefeller Institute in New York.

It was during his years at Berkeley that David met Doris Martin, a fellow student, attending library school. They were married on 21 August 1933 and went off to New York together. The Rockefeller experience was inspiring. Here he studied keratin proteins in hair, wool, and feathers and showed that reduction of the disulfide bonds could degrade fibrous structure. Michaelis was impressed, and David's success gave him the confidence in himself and the nose for good research problems that were to be the hallmarks of his scientific career.

In 1935, he was attracted to the University of Rochester by Benjamin H. Willier who was building one of the most exciting departments of biology there. Simon Flexner had offered him a three-year appointment at Rockefeller, but David went to Rochester to be on his own and launch his academic career. Rochester was a highlight in his scientific work, for it was here that he isolated cytochrome C from wheat germ and showed that respiration in plants is mediated by cytochrome oxidase as it is in animals. The Goddards' daughter, Alison, was born in 1937 in Rochester.

Receiving his first of two Guggenheim Fellowships in 1941, David worked with E. F. Adolph in the study of salt and water balance in soldiers in the desert for part of the year, and then went on to the laboratory of James Franck at Chicago where he continued his work on plant respiration and wrote a definitive chapter on cellular respiration in Rudolf Höber's treatise on *The Physical Chemistry of Cells and Tissues*.

At Rochester, he ran the Navy V-12 program for physician training and was promoted to full professor of botany by 1945. In 1946, however, he moved to the University of Pennsylvania because he thought he would have more time for research there. That summer his son, Robert, was born, just before the move to Philadelphia.

At Penn, he set up his laboratory in old McFarlane Hall which he was instrumental in renovating. There he joined J. R. Schramm, Conway Zirkle, John M. Fogg, William Seifritz, Edgar Wherry, and Wesley Hutchinson. With a research grant from the Sloan-Kettering Foundation, he set up his research enterprise and brought in Ralph Erickson as a research associate. During that time, he was instrumental in the recruitment of Daniel O'Kane, Edward Cantino, and John Preer. With these appointments, the inevitable happened, and zoology, microbiology and botany were merged into a single Division of Biology with David Goddard as the director. The year was 1954.

Before that, a number of important events took place in his career and in his life. In 1950, he received a second Guggenheim Fellowship to work at Cambridge, England. Here he carried out experimental work with Leslie Mapson and identified the enzyme critical for the role of glutathione in ascorbate synthesis in plants. This was quite a feat for a young, visiting American to pull off among a group of British biochemists, expert in the glutathione system. During the spring of 1950, while he was away lecturing in Stockholm, news arrived of his election to the United States National Academy of Sciences. Then tragically, he learned that his wife, Doris, had cancer, so they all flew home immediately. She died in May of 1951.

In 1952, he married Dr. Katharine Evans, his childrens' pediatrician and someone who proved to be his greatest source of strength and cheer throughout their long life together. Kitty continued the practice of medicine, all the while being mother, wife, and collaborator in his subsequent responsibilities as provost of the University of Pennsylvania, and later, home secretary of the National Academy of Sciences. It was only during his final illness that she gave up her active role as a physician to devote full time to his care.

Under David Goddard's leadership, the Division of Biology at Penn thrived academically. In addition to Drs. O'Kane, Erickson, and Preer, he recruited Allan Brown, Vincent Dethier, Alan Epstein, Paul Green, Robert MacArthur, Sidney Rodenberg, and William Telfer. It was a distinguished department, and David raised almost \$3 million to renovate the Leidy Laboratories and build the Kaplan Wing and the Biology Towers which were dedicated as the Goddard Laboratories in 1983.

By 1954, David Goddard was elected to membership in the American Philosophical Society and was recognized as a national figure in his field. He won the Stephen Hales Medal of the American Society of Plant Physiologists in 1948, was president of the Society of General Physiologists in 1948, president of the Society for the Study of Growth and Development in 1953, member of the Advisory Board of the Atomic Energy Commission, 1947-49, president of Biological Abstracts, 1955-56, to name some of his outstanding honors and leadership roles.

In 1958, David Goddard was appointed the Gustave C. Kuemmerle Professor of Botany and by now had extended his talents far beyond his laboratory work. At the University of Pennsylvania, he played a leadership role in Gaylord Harnwell's Educational Survey (1953-59) which provided a blueprint for the development of the university. In the fall of 1961, President Harnwell asked him to implement that blueprint by appointing him provost of the university. David Goddard was coming into his own. His personal scholarship, his values of independent thought and academic freedom, his dedication to the highest standards of academic excellence, his warm and affectionate spirit, and his sterling qualities of leadership all had a chance to express themselves in one of the greatest nine-year periods the University of Pennsylvania has known. It was the right man and the right time.

Being provost was not easy. David Goddard wrote the *Integrated Development Plan* which led to a \$93 million fund-raising campaign that physically changed the University of Pennsylvania into a beautiful residential campus with excellent academic facilities. All the while, he was pushing up the quality of undergraduate, graduate, and professional students and recruiting a scholarly faculty, personally interviewing every

candidate for appointment or promotion to the rank of assistant professor or above.

That wasn't the hard part. The hard part was doing all those things while holding the university together during the student and faculty activism of the Vietnam war years. With a staff of dedicated colleagues, including John Hobstetter, Michael Jameson, Leo Levin, Alice Emerson, Stanley Johnson, Jack Russell, and Linda Koons, he adroitly handled each emergency and avoided destructive confrontation. When the faculty questioned the ethics of secret military research on the campus, he got behind the concept that academic freedom required that all research be publishable without undue delay. That settled the issue without getting tangled up in the question of secret military research. When the students protested the razing of homes in West Philadelphia to make way for the University City Science Center, Dave Goddard and his staff eased them out of a six-day sit-in and helped them organize a peaceful demonstration. He led a delegation of students and faculty to Washington to protest the Vietnam war, but he wisely refused to let the university take an official public position on such a political issue. He laid the groundwork for the emerging black presence and women's rights on campus.

In 1970, he helped incoming president Martin Meyerson get his administration started and then graciously stepped aside to let a new regime take over. Following this period, he wrote and lectured as professor of Science and Public Policy, giving a memorable talk before the American Philosophical Society in 1971 on the theme that "Universities serve society best by being centers of free inquiry, where conclusions are openly arrived at, and where there is a receptivity to new ideas." But before long, he returned to his original academic love, biology, and as University Professor of Biology, taught exciting freshman seminars to young men and women undergraduates.

His renewed academic freedom was short-lived, however, for in 1975, he was elected home secretary of the National Academy of Sciences for a four-year term. This meant he had to spend two or three days a week in Washington and devote himself to the affairs of the academy as a member of its council and a member of the governing board of the National Research Council, the academy's operating arm. He did a very able job in these new responsibilities, but privately admitted to frustration at the division of tasks within the academy, feeling that the intellectual challenges lay in the president's and the National Research Council offices.

It was with some relief that he returned to the University of Pennsylvania, now provost emeritus and professor emeritus. But his academic joy was to fade slowly over the next few years in the face of a growing

illness which led to his death on 9 July 1985 at the age of seventy-seven.

But the memories were great for this man and the satisfactions full. He had received every honor from the academic community and returned to it every service from outstanding scientific scholarship to wise and foresighted leadership. His academic community was national and international. He was president of the American Society of Plant Physiologists in 1958, he received the Botanical Society of America's Certificate of Merit in 1962. He was chairman of President Kennedy's Panel on Drug Abuse in 1962. He was on the board of directors of the American Association for the Advancement of Science (1963-68), he chaired the National Academy of Sciences Committee on the USSR and Eastern Europe from 1965 to 1968 and negotiated a renewal of the Exchange Agreement with the Soviet Academy of Sciences in 1967 that allowed U.S. and Soviet scientists to work in each others' laboratories.

In the American Philosophical Society, he was a councillor from 1972-75, on the Library Committee 1973-85, on the Committee on Council Nominees, 1974-75, and on the Advisory Committee on Elections 1975-83. Most important of all, he was an active member of the Society who enjoyed the intellectual stimulation of our meetings immensely. He also enjoyed the good fellowship and the sense of being in an intellectual community to which he could and did contribute significantly. He was proud to be a member of the Wistar Association and a faithful participant in its activities.

In all that he did, his scientific work and his teaching, his academic leadership at the University of Pennsylvania, his active role in the National Academy of Sciences, and his devotion to the American Philosophical Society, David Goddard showed his zest for life, his constant intellectual striving, and his exercise of the highest standards of excellence. We all gained much from our association with him and will continue to gain from what he bequeathed us.

ELIOT STELLAR



ELECTED 1940
Vice-President 1957-60
Councillor 1953-56
Committee on Council
Nominees 1958-60
Committee on Membership
I 1942-46; 1951-57; 1960-65
Committee on Nomination of
Officers 1955-56; 1961-62
Magellanic Premium Committee
1952-72

JEROME C. HUNSAKER
(1886-1984)

Dr. Jerome C. Hunsaker, born 26 August 1886 in Saginaw, Michigan, died 10 October 1984. He was active in aeronautics for over six decades, and was widely recognized for his many contributions to research, design, and education in this field.

Hunsaker graduated from the U.S. Naval Academy at the head of his class in 1908, and after a year of sea duty aboard the USS *North Carolina* and the USS *California*, commenced his graduate studies in naval architecture at the Massachusetts Institute of Technology.

At about the time he received his Master of Science degree in 1912, an aviation "meet" was held near Boston, and a French Blériot "machine" flew around the harbor. There was great local interest in the flight of this aircraft, and Hunsaker was encouraged by several of his professors to investigate the status of aircraft design theory. He reviewed the writings of many of the early pioneers and concluded that Gustave Eiffel's